

**SONY®**

MPEG DECODER UNIT

**BDX-D1000**

DESCRAMBLER BOARD  
**BDKP-D1003**

DESCRAMBLER BOARD  
**BDKP-D1004**

INSTALLATION MANUAL

1st Edition (Revised 1)

Serial No. 10001 and Higher (BDX-D1000)

Serial No. 10001 and Higher (BDKP-D1003)

Serial No. 10001 and Higher (BDKP-D1004)

## **警告**

このマニュアルは、サービス専用です。

お客様が、このマニュアルに記載された設置や保守、点検、修理などを行うと感電や火災、人身事故につながる可能性があります。

危険をさけるため、サービストレーニングを受けた技術者のみご使用ください。

## **WARNING**

This manual is intended for qualified service personnel only.

To reduce the risk of electric shock, fire or injury, do not perform any servicing other than that contained in the operating instructions unless you are qualified to do so. Refer all servicing to qualified service personnel.

## **WARNUNG**

Die Anleitung ist nur für qualifiziertes Fachpersonal bestimmt.

Alle Wartungsarbeiten dürfen nur von qualifiziertem Fachpersonal ausgeführt werden. Um die Gefahr eines elektrischen Schlages, Feuergefahr und Verletzungen zu vermeiden, sind bei Wartungsarbeiten strikt die Angaben in der Anleitung zu befolgen. Andere als die angegebenen Wartungsarbeiten dürfen nur von Personen ausgeführt werden, die eine spezielle Befähigung dazu besitzen.

## **AVERTISSEMENT**

Ce manuel est destiné uniquement aux personnes compétentes en charge de l'entretien. Afin de réduire les risques de décharge électrique, d'incendie ou de blessure n'effectuer que les réparations indiquées dans le mode d'emploi à moins d'être qualifié pour en effectuer d'autres. Pour toute réparation faire appel à une personne compétente uniquement.

### **Attention-when the product is installed in Rack (For BDX-D1000)**

#### **1. Prevention against overloading of branch circuit**

When this product is installed in a rack and is supplied power from an outlet on the rack, please make sure that the rack does not overload the supply circuit.

#### **2. Providing protective earth**

When this product is installed in a rack and is supplied power from an outlet on the rack, please confirm that the outlet is provided with a suitable protective earth connection.

#### **3. Internal air ambient temperature of the rack**

When this product is installed in a rack, please make sure that the internal air ambient temperature of the rack is within the specified limit of this product.

#### **4. Prevention against achieving hazardous condition due to uneven mechanical loading**

When this product is installed in a rack, please make sure that the rack does not achieve hazardous condition due to uneven mechanical loading.

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# Manual Structure

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## Purpose of this manual

This manual is the installation manual of the BDX-D1000 MPEG Decoder Unit and the following optional boards.

- Descrambler Board BDKP-D1003
- Descrambler Board BDKP-D1004

This manual is intended for use by trained system and service engineers, and describes information regarding installation.

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## Contents

The following is a summary of all the sections for understanding the contents of this manual.

### **Section 1 Installation**

Explains the operating environment, the connector information for peripheral equipment connections and how to rack mounting, etc.

### **Section 2 Installation of Optional Boards**

Explains how to install the optional boards.

### **Section 3 Service Overview**

Explains the description of internal indicators and summary of ISR.

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## Related manuals

Besides this installation manual, the following manuals are available for the BDX-D1000.

- **Operation Manual (Supplied with the BDX-D1000)**

This manual explains the overview of the BDX-D1000, and the system configuration examples.

- **Maintenance Manual (Not supplied with the BDX-D1000)**

This manual describes information that premise the service based on board replacement and parts replacement (adjustments, board layouts, schematic diagrams, parts list, etc.).

If this manual is required, please contact to Sony's service organization.



# Section 1

## Installation

### 1-1. Installation Environment

Operating temperature : 5 °C to 40 °C

Storage temperature : -20 °C to +55 °C

Operating humidity : 20 % to 90 % (non-condensing)

Do not install the BDX-D1000 in the following locations:

- Areas where the unit will be exposed to direct sun light or any other strong lights.
- Areas near heat sources.
- Dusty areas or areas where it is subject to vibration.
- Areas with strong electric or magnetic fields.
- Areas where is subjected to electricity noise.
- Areas where is subjected to static electricity noise.

To prevent the temperature rise inside the BDX-D1000, pay careful attention to circulation of air in the place where the BDX-D1000 is installed.

The rear side of the BDX-D1000 should be at least 20 cm (8 inches) away from walls for ventilation and maintenance.

#### CAUTION

Do not block the ventilation holes.

If the ventilation holes are blocked, overheating inside the unit may cause fire.

### 1-2. Power Supply

#### 1-2-1. Power Specifications

Power requirements : AC 100 to 240 V  
50/60 Hz

Current consumption : maximum 2.0 A (at 100 V)  
maximum 1.0 A (at 240 V)

A switching regulator is used for the power supply of the BDX-D1000. The voltage within the range of 100 V to 240 V can be used without changing the supply voltage.

#### Note

As the inrush current at turn-on is maximum 20 A (at 100 V)/maximum 40 A (at 240 V), the capacity of the AC power must be adequate with the inrush current of maximum 20 A (at 100 V)/maximum 40 A (at 240 V).

If the capacity of the AC power is not the adequately large, the breaker of the AC power at the supply side will operate or the BDX-D1000 will abnormal operate.

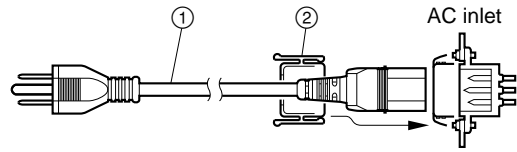
#### 1-2-2. Power Cord

##### WARNING

To avoid a fire or an electric shock, be sure to use the designated power cord. And do not damage to the power cord.

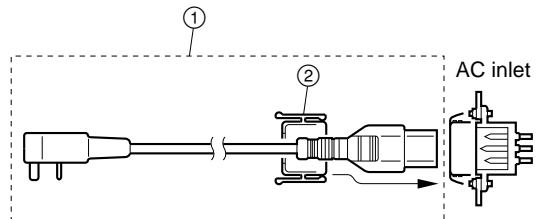
Power cord for the customer in the U.S.A. and Canada.

- ① Power cord set 1-557-377-11
- ② Plug holder (Black) 2-990-242-01



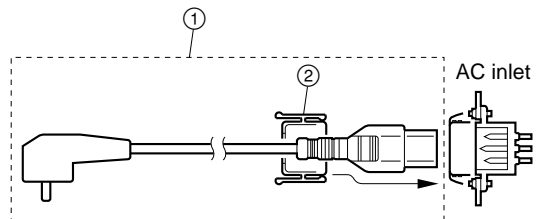
Power cord for the customer in the United Kingdom.

- ① DK-2401 (UK) (approx. 2.4 m)
  - ② Plug holder (Black) 2-990-242-01
- Plug holder is included in DK-2401 (UK).



Power cord for the customer in Europe except the United Kingdom.

- ① DK-2401 (AE) (approx. 2.4 m)
  - ② Plug holder (Brown) 3-613-640-01
- Plug holder is included in DK-2401 (AE).

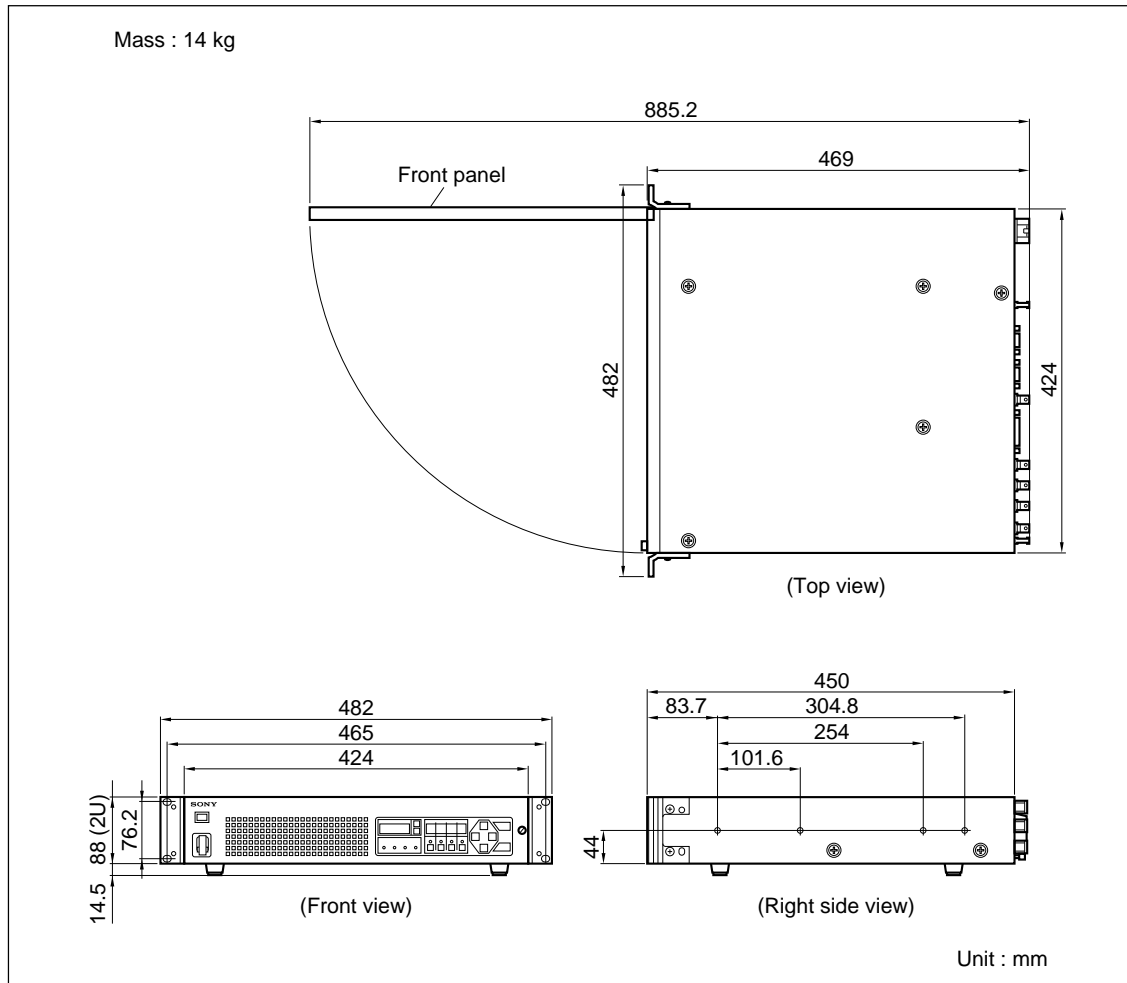


#### Note

For the customer outside of the area as shown above or in a part of Europe, the above-mentioned power cords can not be used.

Use the power cord that is applicable to the places in the world.

### 1-3. External Dimensions



### 1-4. Rack Mounting

The BDX-D1000 can be mounted in a 19-inch standard rack.

#### Note

- When the BDX-D1000 or the peripheral equipment is mounted in a 19-inch standard rack, it is recommended to install a ventilation fan to prevent a temperature rise in the rack.  
Make sure that all the units in the rack should be operated within the temperature range of 5 °C to 40 °C.
- Connect the enough long cables on the rear panel, considering that the BDX-D1000 is pulled out.
- An installation manual is supplied with the RMM-30 rack mount rail. However follow the instructions in this manual. Because the rack mounting procedures of the BDX-D1000 are different from the procedures explained in RMM-30 installation manual.
- To prevent falling the rack, fix the rack on the horizontal firm floor with bolts.



## Required parts

- Rack Mount Rail, RMM-30
  - Rail with bracket : 2 pcs.
  - Screw (B5×8) : 8 pcs.
- Screw for inner rail (B4×8) (\*1) : 6 pcs.
- Screw for rack mounting (RK5×16) : 4 pcs.  
(Sony part number: 7-682-378-04)
- Washer for rack mounting : 4 pcs.  
(Sony part number: 2-297-913-01)

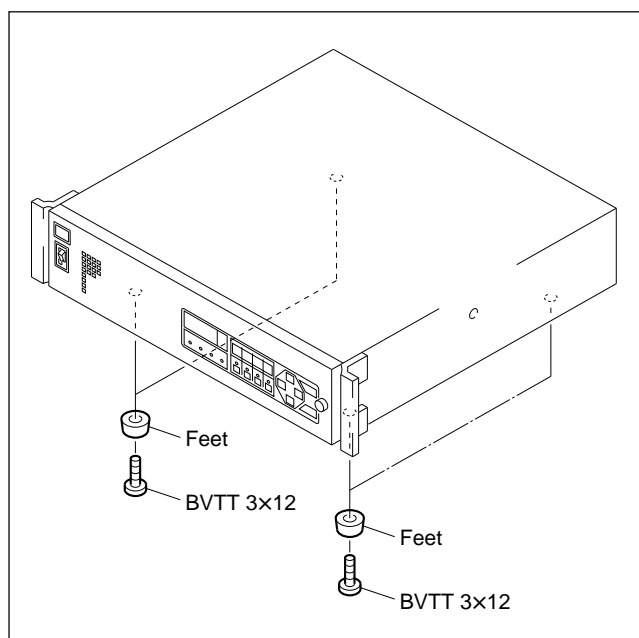
(\*1) : The BDX-D1000 comes with the eight screws. The two screws of them are spare.

### Note

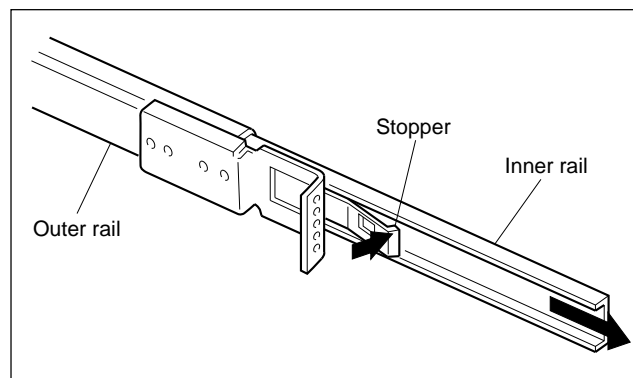
Be sure to use the RMM-30 Rack Mount Rail. If a rack mount rail other than the RMM-30 is used, the BDX-D1000 may be dropped by insufficient strength of the rack mount rail. This may cause a injury.

## Procedures

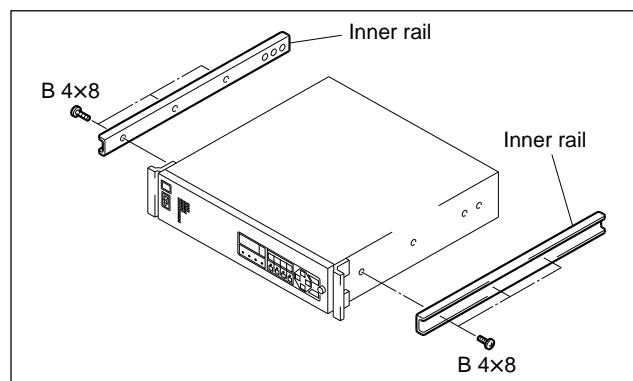
1. Turn the power off.
2. Remove the four feet from the bottom of the BDX-D1000.



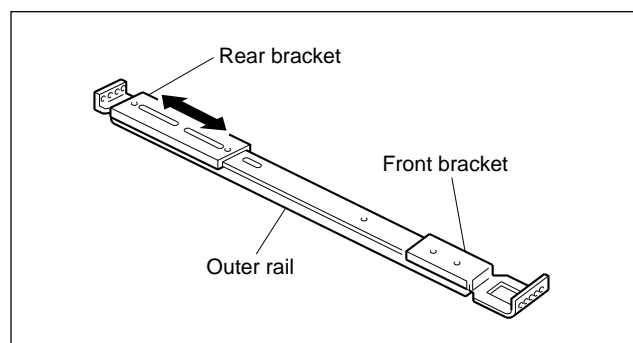
3. While pressing the stopper of the rail, pull out the inner rail.



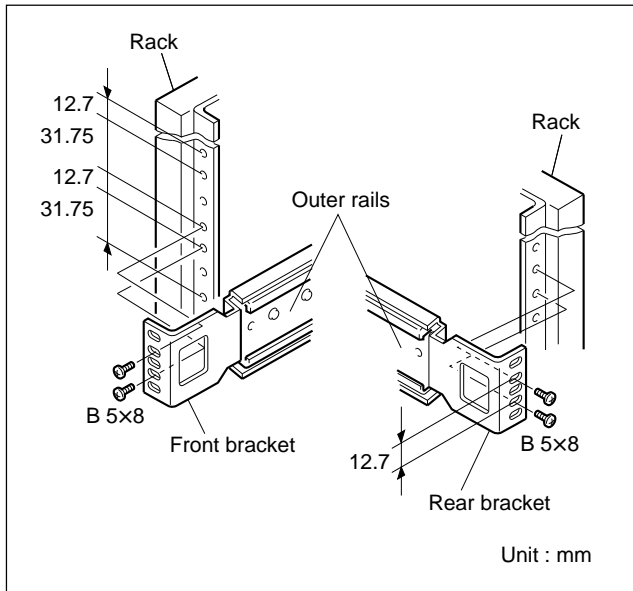
4. Attach the inner rails to the BDX-D1000 using the six screws (B4×8) supplied with the BDX-D1000.



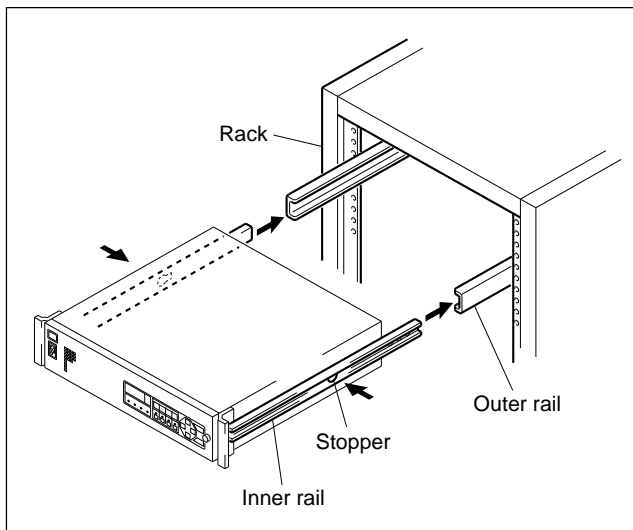
5. Loosen the screws fastening the rear bracket to the outer rail, and adjust the position of the rear bracket with the rack depth.



6. Attach the front and rear brackets to the outside of the rack temporarily using the eight screws (B5×8) supplied with RMM-30.



7. While pressing the stoppers of the inner rails, slide the inner rails fully into the outer rails.



#### WARNING

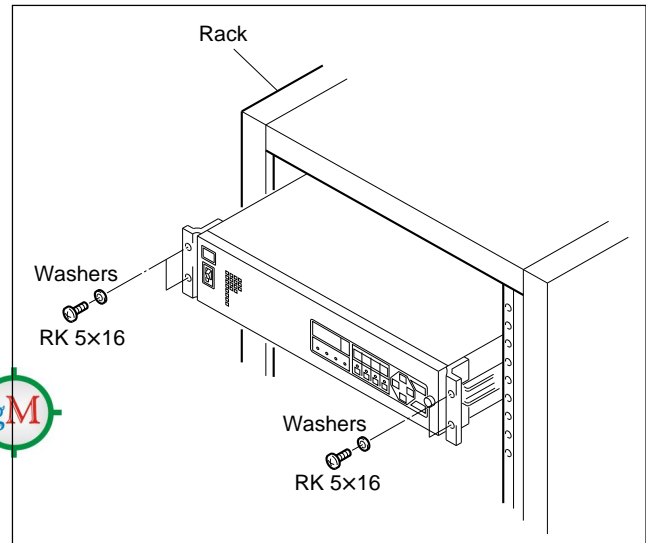
- Be sure to mount the BDX-D1000 in the rack with two or more persons.  
Trying to handle this job by one-person could occur to injury.
- Be careful not to get caught your hand and finger in the rack mount rail when installing the unit in the rack.

8. After confirming that the BDX-D1000 can be moved smoothly, tighten the screws (B5×8) secured temporarily in the step 6.

#### Note

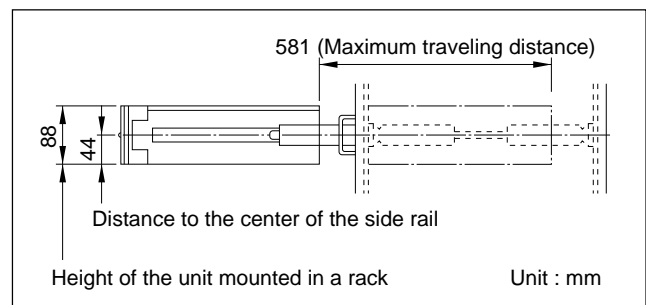
When securing the front brackets to the rack by screws, pull out the BDX-D1000 about 20 cm (8 inches), and fasten the screws of the front brackets to the rack.

9. After installing the BDX-D1000 in the rack, secure the unit to the rack by the prepared four screws (RK5×16) and four washers.



#### Note

When the BDX-D1000 is mounted in a rack, the maximum traveling distance is illustrated below.



## 1-5. Matching Connectors and Cables

When connecting cables to various connectors on the rear panel at the time of installing or servicing, connect the following connectors/cables or their equivalents.

<b>BDX-D1000</b>	<b>Matching Connector/Cable</b>	
<b>Panel Indication</b>	<b>Connector/Cable</b>	<b>SONY Part No.</b>
REF. VIDEO	BNC 75 $\Omega$ , male	1-564-742-11
BIT STREAM INPUT IF	BNC 75 $\Omega$ , male or Adaptor (BNC to F) *1	1-564-742-11 —
DVB ASI/SDDI	BNC 75 $\Omega$ , male 5C-2V cable *2	1-564-742-11 —
PARALLEL	D-sub 25-pin, male	1-566-356-11 (Solderless type) 1-564-747-11 (Solder type)
STREAM OUT DVB/ASI	BNC 75 $\Omega$ , male 5C-2V cable *2	1-564-742-11 —
AUX	D-sub 9-pin, female	Commercially available
CONTROL RS-232C	D-sub 9-pin, male	1-560-651-00 (Connector) 1-561-749-00 (Shell)
10BASE-T	RJ45 modular jack *3	—
SDI VIDEO OUTPUT 1 2	BNC 75 $\Omega$ , male 5C-2V cable *2	1-564-742-11 —
DIGITAL AUDIO OUTPUT CH1/2 CH3/4 CH5/6 CH7/8	BNC 75 $\Omega$ , male 5C-2V cable *2	1-564-742-11 —
DATA OUT 10BASE-T	RJ45 modular jack *3	—
ANALOG VIDEO OUTPUT COMPOSITE COMPONENT	BNC 75 $\Omega$ , male	1-564-742-11
ANALOG AUDIO OUTPUT CH1 CH2 CH3 CH4	XLR 3-pin, female	1-508-083-00 *4
MONITOR R L	XLR 3-pin, female	1-508-083-00 *4

\*1 : BERG ELECTRONICS 29-JP218 or the equivalent

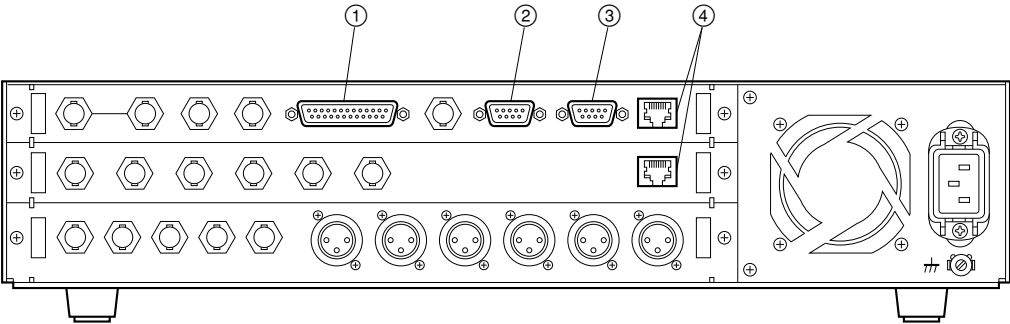
\*2 : 5C-2V of Fujikura America Inc./Fujikura Europe Ltd. (FEL) or the equivalent

\*3 : Conforms to IEEE 802.3 Ethernet\*\* 10BASE-T

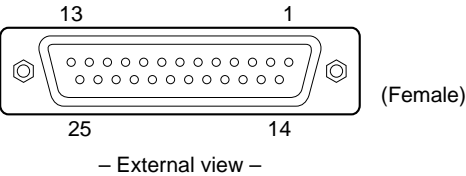
\*4 : CANNON XLR-3-12C or the equivalent

\*\* : Ethernet is a registered trademark of Xerox Corporation.

1-6. Input and Output Signal of Connector

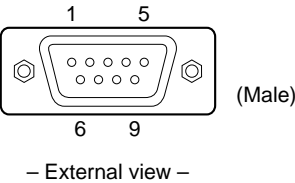


① PARALLEL (D-sub 25-pin)



Pin No.	Signal	I/O
1	Clock A	O
2	System GND	—
3	Data 7A (MSB)	O
4	Data 6A	O
5	Data 5A	O
6	Data 4A	O
7	Data 3A	O
8	Data 2A	O
9	Data 1A	O
10	Data 0A	O
11	DVALID A (=Data valid A)	O
12	PSYNC A (=Packet sync A)	O
13	Cable Shield	—
14	Clock B	O
15	System GND	—
16	Data 7B (MSB)	O
17	Data 6B	O
18	Data 5B	O
19	Data 4B	O
20	Data 3B	O
21	Data 2B	O
22	Data 1B	O
23	Data 0B	O
24	DVALID B (=Data valid B)	O
25	PSYNC B (=Packet sync B)	O

② AUX (D-sub 9-pin)

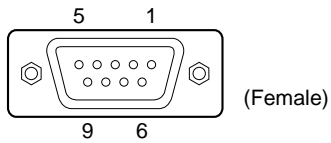


Pin No.	Signal	I/O
1	—	—
2	—	—
3	—	—
4	—	—
5	GND	—
6	—	—
7	—	—
8	—	—
9	—	—

Note

This connector is not used in normal times.

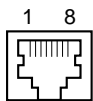
### ③ RS-232C (D-sub 9-pin)



– External view –

Pin No.	Signal	I/O
1	—	—
2	RXD	I
3	TXD	O
4	DTR	O
5	SG	—
6	—	—
7	RTS	O
8	CTS	I
9	—	—

### ④ 10BASE-T (8-pin Modular jack)



– External view –

Pin No.	Signal	I/O
1	TXD +	O
2	TXD –	O
3	RXD +	I
4	—	—
5	—	—
6	RXD –	I
7	—	—
8	—	—

## 1-7. Switch Setting of Connector Panel

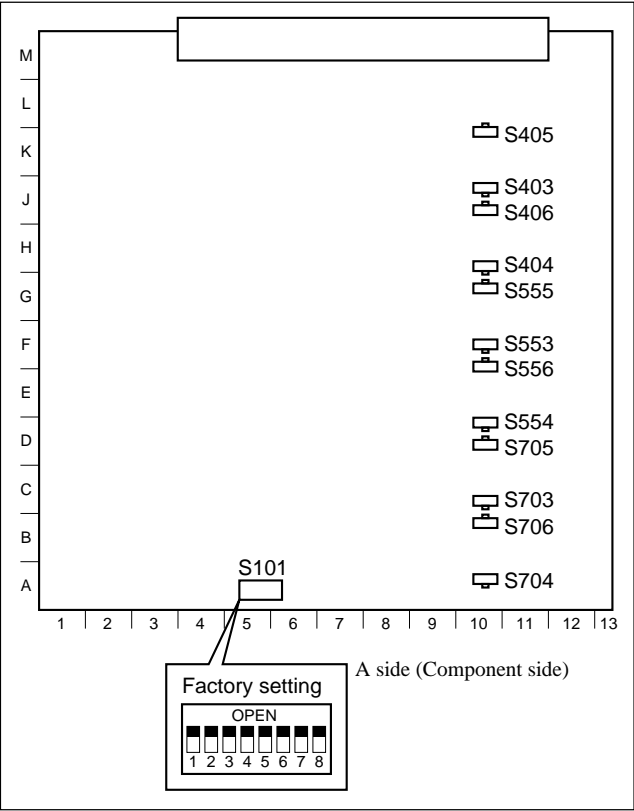
Set the 75  $\Omega$  termination switch of REF.VIDEO for your purpose.

When the loop-through output is not used, set the 75  $\Omega$  termination switch to ON.

This switch is factory-set to OFF.

# 1-8. Settings of Internal Switches

## 1-8-1. DAC-31 Board



### Note

- The addresses on the board are shown by ( ) marks.
- For the switches described “Factory use”, do not change the factory setting.

### S101 (A-5): Factory use

Factory setting : All switch levers are set to OPEN (upper position).

### S403, S404, S553, S554, S703, S704:

#### Output Headroom Select switches

Select the headroom of the analog audio output CH1 to CH4 and monitor output LCH/RCH.

Channel	Switch	Headroom			Factory Setting
		20 dB	18 dB	16 dB	
CH1	S554 (D-10)	20	18	16	20
CH2	S553 (F-10)	20	18	16	20
CH3	S404 (H-10)	20	18	16	20
CH4	S403 (J-10)	20	18	16	20
L (MONITOR)	S703 (C-10)	20	18	16	20
R (MONITOR)	S704 (A-10)	20	18	16	20

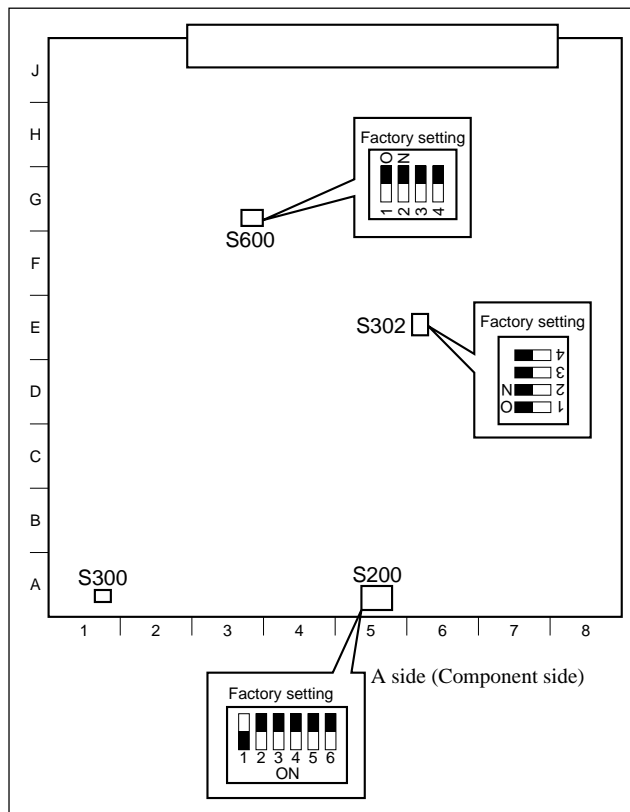
### S405, S406, S555, S556, S705, S706:

#### Output Reference Level Select switches

Select the reference level of the analog audio output CH1 to CH4 and monitor output LCH/RCH.

Channel	Switch	Reference Level				Factory Setting
		+4 dBm	0 dBm	-3 dBm	-20 dBm	
CH1	S556 (F-10)	+4	0	-3	-20	+4
CH2	S555 (G-10)	+4	0	-3	-20	+4
CH3	S406 (J-10)	+4	0	-3	-20	+4
CH4	S405 (L-10)	+4	0	-3	-20	+4
L (MONITOR)	S705 (D-10)	+4	0	-3	-20	+4
R (MONITOR)	S706 (B-10)	+4	0	-3	-20	+4

## 1-8-2. DEC-99 Board



### Note

- The addresses on the board are shown by ( ) marks.
- For the switches described “Factory use”, do not change the factory setting.

### S200-1 (A-5): 525/625 Select switch

Selects the video output mode.

ON : 525/60 Hz (NTSC) system

OFF : 625/50 Hz (PAL) system

Factory setting: ON (lower position)

### Note

After this setting is changed, turn the power off and on again, or press the reset switch (S300).

### S200-2, 3 (A-5): Factory use

Factory setting: OFF (upper position)

### S200-4 (A-5): RS-232C/ISR Select switch

Selects the mode of the RS-232C control port.

ON : ISR mode

OFF : Normal operation

Factory setting: OFF (upper position)

### Note

After this setting is changed, turn the power off and on again, or press the reset switch (S300).

### S200-5 (A-5): REMOTE/LOCAL Select switch

Selects whether the operation of the BDX-D1000 is controlled by an external computer via Ethernet\*\* or by using the menu and the buttons on the front panel.

ON : By an external computer via Ethernet\*\*

(REMOTE control)

OFF : By using the menu and buttons

(LOCAL control)

Factory setting: OFF (upper position)

### Note

When remote control mode is selected, it can not be controlled from the front panel.

At this time, " " is displayed on the PROGRAM indicator and " " is displayed on the AUDIO indicator.

### S200-6 (A-5): LNB Power Select switch

Selects whether or not the power is provided from the IF terminal to the LNB (Low Noise Block).

ON : Power is provided from the IF terminal.

OFF : Power is not provided from the IF terminal.

Factory setting: OFF (upper position)

### S300 (A-1): Reset switch

### Note

Do not press this switch under normal conditions.

### S302 (E-6): Factory use

Factory setting: All switch levers are set to ON.

### S600 (G-3): Factory use

Factory setting: All switch levers are set to ON.

\*\* : Ethernet is a registered trademark of Xerox Corporation.

## 1-9. Settings of Parameters

Set the parameters of the following menus as required.

- TUNER SETTING menu (Only when using the QPSK input.)
- INPUT STATUS menu (Only when changing the input stream)
- IP ADDRESS in SYSTEM INFO. menu (Only when using Ethernet\*\*.)
- VIDEO CONTROL menu (For your purpose)
- AUDIO CONTROL menu (For your purpose)

### Note

For more information about the menu operation, refer to the operation manual.

### TUNER SETTING menu

When using the IF terminal (QPSK input), set the various requirements of the tuner.

```
TUNER SETTING
IF FREQ.      1550 MHz
FREQ SFT(H)   10853 MHz
FREQ SFT(V)   11108 MHz
LNB PWR(H/V)  11/15 OFF
CONV. RATE    3/4
SYMBOL RATE   21096 kbps
POLARIZATION  H
I/Q           NON-INV
C/N           12.3 dB
```

### INPUT STATUS menu

Set the input stream (INPUT SELECT) and the synchronize mode (REF. LOCK) for your purpose.

```
INPUT STATUS
INPUT SELECT  ASI
REF. LOCK     AUTO
STREAM INPUT  EXIST
REF. VIDEO    EXIST
```

### SYSTEM INFO. menu

When using the Ethernet\*\*, set the IP address.

```
SYSTEM INFO.
MODEL NAME    BDX-D1000
SERIAL NO.    10001
SOFT VER.     1.00
IP ADDRESS
192.  1.  2.  4
IP ADDRESS (BDKP-D1001)
192.  1.  2.  5
```

### VIDEO CONTROL menu

Set the requirements of video output for your purpose.

```
VIDEO CONTROL
VITC          AUTO
VITC L1/L2    16/18
PACKET VBI    AUTO
VIDEO INDEX   ON
LUMIN. GAIN   0x800
CHROM. GAIN   0x800
COMPONENT     BETACAM
HUE           0 deg.
SETUP         + 0.0IRE
```

### AUDIO CONTROL menu

Set the requirements of audio output for your purpose.

```
AUDIO CONTROL
ADVANCE       +0us
CH1/2 GAIN    -0dB
CH3/4 GAIN    -0dB
CH5/6 GAIN    - - -
CH7/8 GAIN    - - -
RATE CONV.    AUTO
```

\*\* : Ethernet is a registered trademark of Xerox Corporation.



## Section 2

### Installation of Optional Boards

#### 2-1. General Information for Installation

The following boards are available as options.

##### **BDKP-D1003    Descrambler Board**

When the BDKP-D1003 (SCR-7 board) is installed on the DEC-99 board, it can be descrambled by DVB common system.

##### **BDKP-D1004    Descrambler Board**

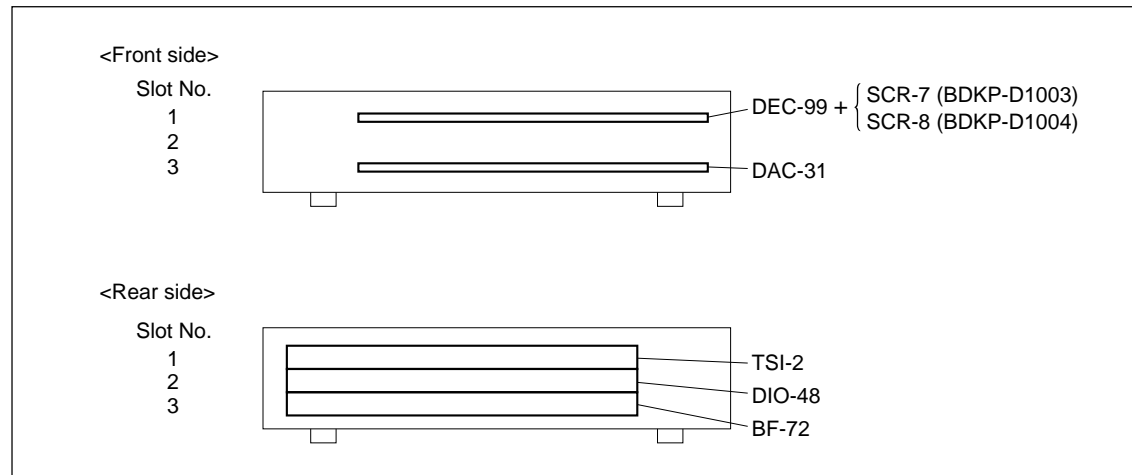
When the BDKP-D1004 (SCR-8 board) is installed on the DEC-99 board, it can be descrambled by DES system.

##### **Note**

Either BDKP-D1003 or BDKP-D1004 can be installed on the DEC-99 board.

The assignments of slots are as follows:

Slot No.	Front side	Rear side
1	DEC-99 + { SCR-7 (BDKP-D1003) SCR-8 (BDKP-D1004)	TSI-2
2	—	DIO-48
3	DAC-31	BF-72

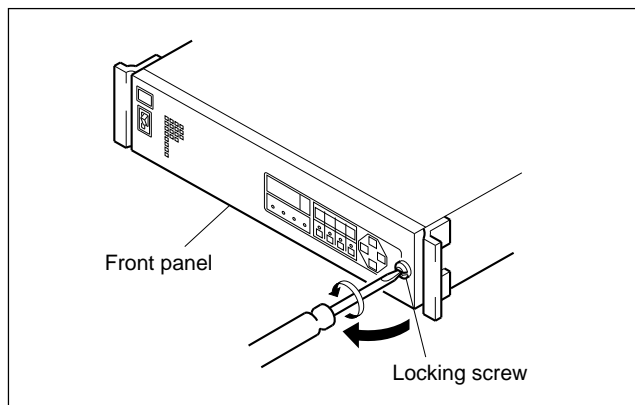


## 2-2. BDKP-D1003/D1004 Installation

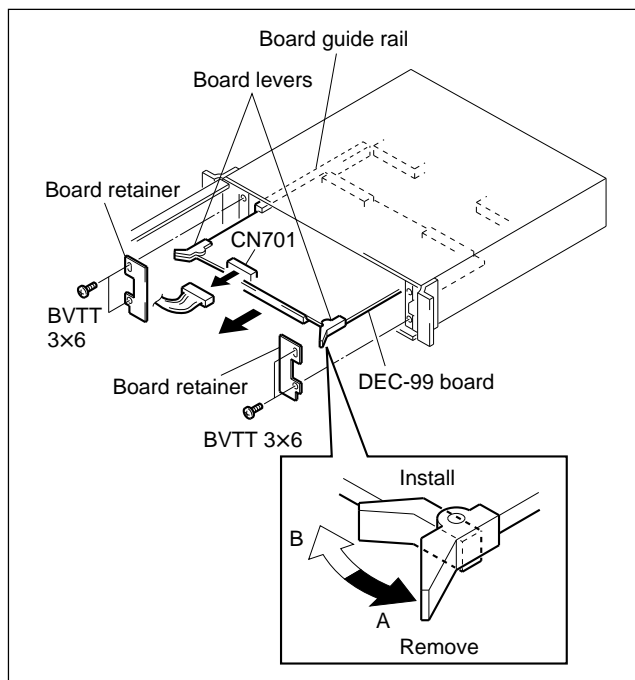
Either BDKP-D1003 (SCR-7 board) or BDKP-D1004 (SCR-8 board) can be installed on the DEC-99 board.

### Installation procedures

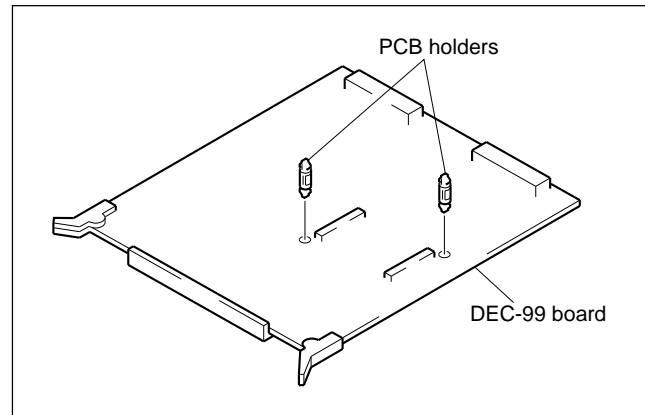
1. Turn the power off.
2. Unplug the appliance from the outlet.
3. Loosen the locking screw on the front panel using a flatblade screwdriver.
4. Pull the locking screw toward you and open the front panel.



5. Disconnect the connector CN701 on the DEC-99 board.
6. Remove the four screws, and remove the both board retainers.
7. Pull out the DEC-99 board while opening the both board levers of the board in the direction of the arrow A.



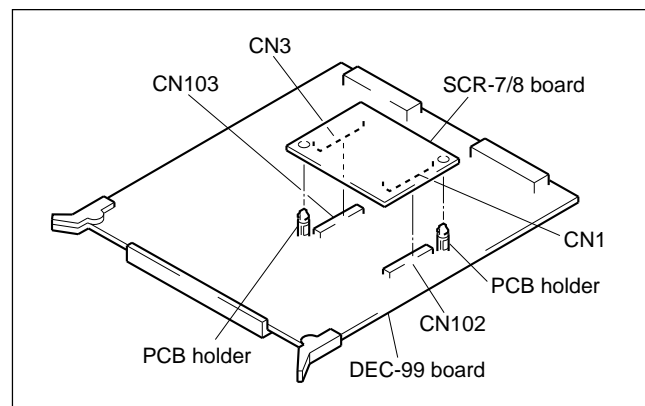
8. Fix the two PCB holders supplied with the BDKP-D1003/D1004 to the DEC-99 board.



9. Match the connectors CN1 and CN3 on the SCR-7/8 board with the connectors CN102 and CN103 on the DEC-99 board.
10. Connect the connectors on the SCR-7/8 board to the connectors on the DEC-99 board while inserting the PCB holders through the holes on the SCR-7/8 board.

#### Note

Make sure that the connectors are connected tightly.



11. Insert the DEC-99 board into the Slot No.1 along the board guide rails.
12. Close the both board levers in the direction of the arrow B while pushing the DEC-99 board.
13. Connect the connector CN701 on the DEC-99 board.
14. Install the both board retainers using the four screws.
15. Close the front panel.
16. Tighten the locking screw.

### Confirmation after installation

There is no necessity to confirm/adjust after SCR-7/8 board installing.

## Section 3

### Service Overview

#### 3-1. Cleaning of Air Filter

Clean the filter at the inside of the front panel periodically because it apt to catch dust.

It is recommended to replace the filter every five years as a guide.

- Filter: 3-613-550-01

##### **CAUTION**

If the BDX-D1000 is kept on operating with too dusty of the filter, the temperature inside the unit getting rise. This may cause a fire.

5. Clean the dust on the filter using a vacuum cleaner.

##### **Note**

If the filter is too much dusty, it is recommended to wash it.

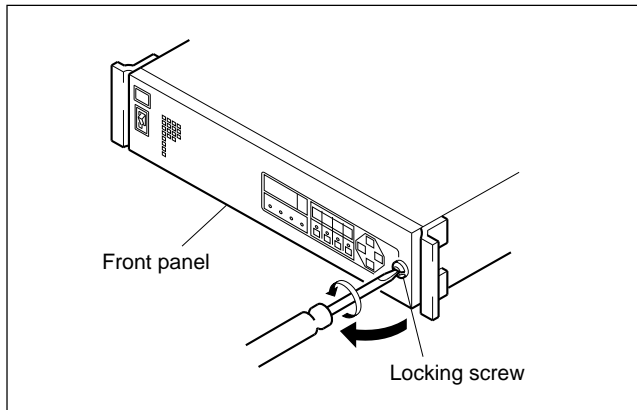
When washing the filter, be sure to dry it well.

6. After cleaning, fasten the filter to the tapes.

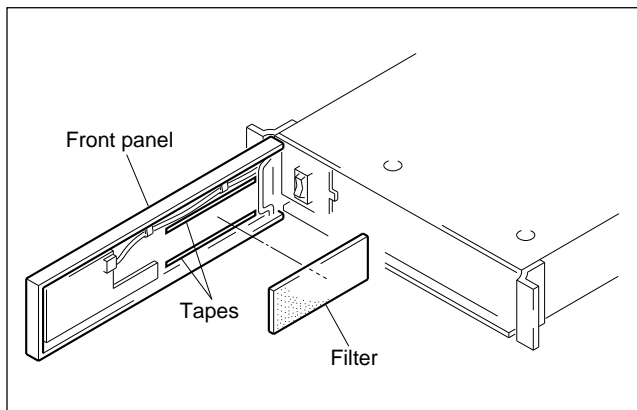
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#### Procedures

1. Turn the power off.
2. Loosen the locking screw on the front panel using a flatblade screwdriver.
3. Pull the locking screw toward you and open the front panel.

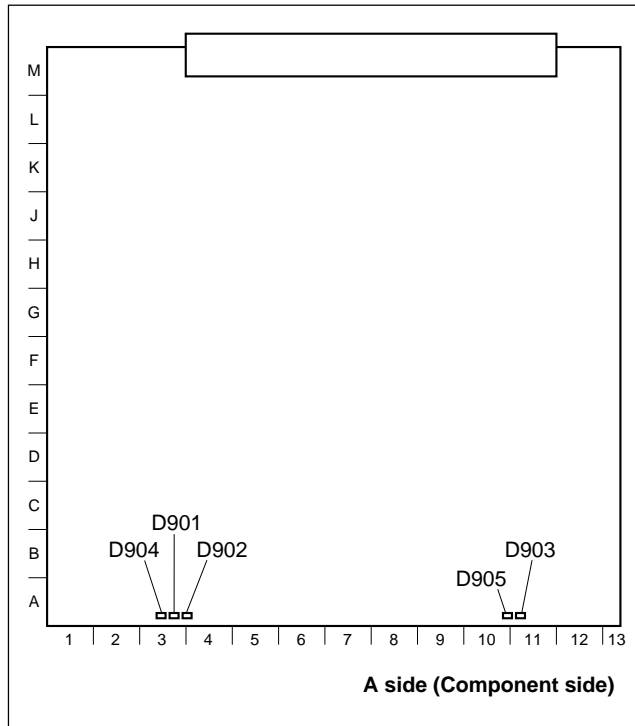


4. Peel the filter away from the tapes.



## 3-2. Description of Internal Indicators

### 3-2-1. DAC-31 Board



#### Note

The addresses on the board are shown by ( ) marks.

#### D901 to D905: Power Voltage Monitor indicator

Monitor each voltage of 3.3, 5, 15, -5 and -15 volts.

All indicators light up when the power is provided properly.

D901 (A-3) (green) : 3.3 V

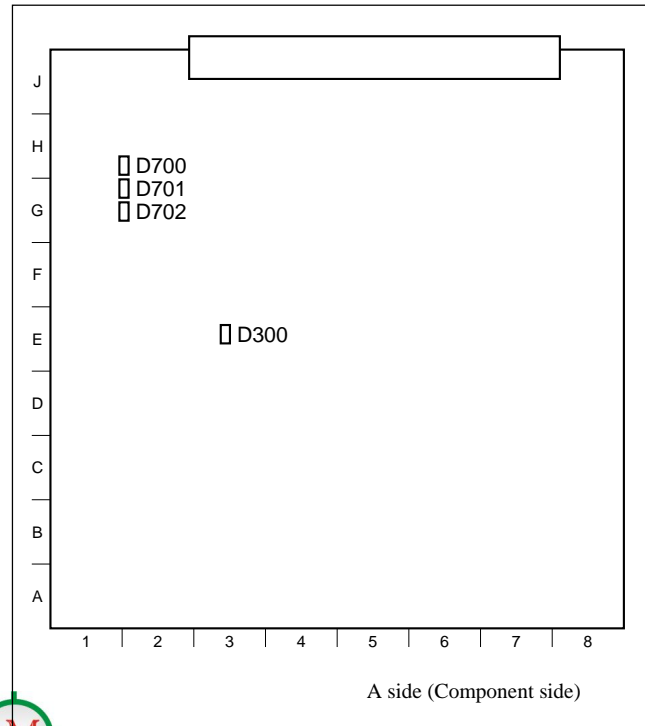
D902 (A-3) (green) : 5 V

D903 (A-11) (green) : 15 V

D904 (A-3) (green) : -5 V

D905 (A-11) (green) : -15 V

### 3-2-2. DEC-99 Board



#### Note

The addresses on the board are shown by ( ) marks.

#### D300 (E-3) (green): CPU indicator

Lights up during CPU runs properly.

#### D700 (H-2) (green): LAN Transmitted indicator

Lights up when data is transmitted to Ethernet\*\* port.

#### D701 (G-2) (green): LAN Link indicator

Lights up when Ethernet\*\* port of the BDX-D1000 links to the hub or Ethernet\*\* port of the external computer.

#### D702 (G-2) (red): LAN Collision Detect indicator

Lights up when a collision is detected at Ethernet\*\* port.

\*\* : Ethernet is a registered trademark of Xerox Corporation.

### 3-3. ISR

#### 3-3-1. Functions Overview

The BDX-D1000 corresponds to the ISR (Interactive Status Reporting) function.

Using this function, the state of the BDX-D1000 and the contents of a generated error can be intensively monitored and managed on the monitor screen of a personal computer. The data displayed on the monitor screen can be stored or printed as a file.

The major functions are as follows:

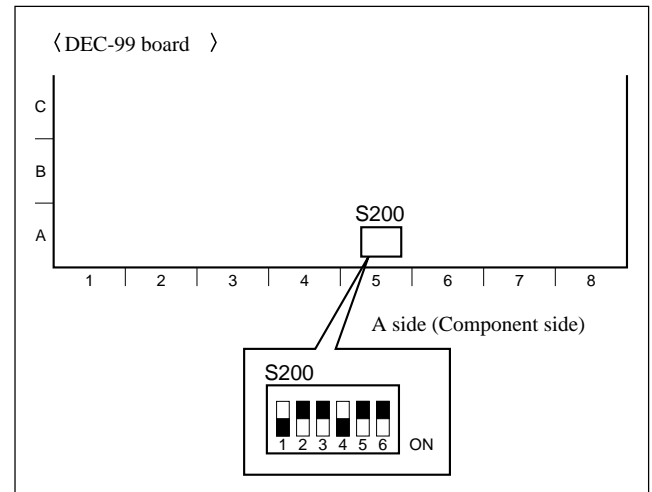
Monitor functions

- Error message
- Operation status

Management functions

- Model name, Serial number
- ROM version

- Set the DIP switch S200-4 on the DEC-99 board to ON (lower position).



- Install the ISR application program software to the personal computer.

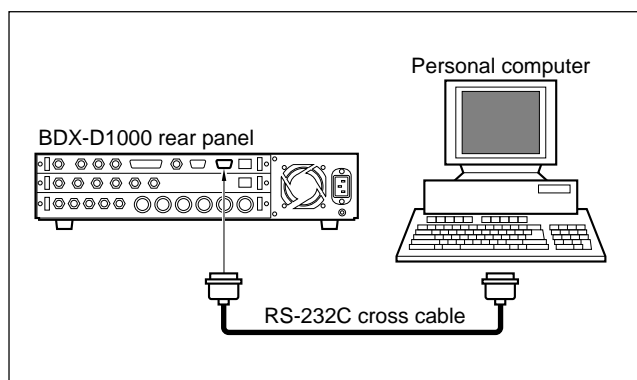
#### 3-3-2. Usage of ISR Functions

The ISR function is controlled by Sony application program software.

For the program software, usage, installation, and operation of a personal computer in which this program software can be used, please consult with your local Sony's sales/service office.

The preparation below is required when managing the BDX-D1000 by ISR.

- Connect a personal computer to the RS-232C connector (D-sub 9-pin) of the BDX-D1000 using a RS-232C cross cable.



#### 3-3-3. Supported Commands

The BDX-D1000 supports the following commands.

For more detailed information of each command, refer to the ISR PROTOCOL manual.

Common Command	Description
* RST;	Resets ISR software.
* IDN?;	Requests ID data.
* TST #####;	Instruct to execute self-diagnostics.
* TST?;	Requests result of self-diagnostics.
* FLAGS?;	Requests flag data.
* STATUS?;	Requests general operation status.
* CMDERR?;	Requests to read command error queue.
* MSG? #####;	Requests error/warning status.

SONY Private Command	Description
HELP:TST?;	Requests test menu.
DEVID;device-id	Sets device ID.

### 3-3-4. Functions of Commands

#### \* RST (Reset)

This command is used to reset the ISR processor (software).

When reset processing is complete, the BDX-D1000 returns “\* ATN:OPC;”.

#### \* IDN? (Identify Query)

This command requests the identity information of the BDX-D1000.

The BDX-D1000 returns the following responses.

Manufacturer : SONY  
 Model : BDX-D1000  
 Device ID : Same data as that set for DEVID command. (If the device-id is not defined, the BDX-D1000 returns “NONE”).  
 Serial number : Serial number of the BDX-D1000 (five digits)  
 Software version : 1.00  
 Virtual machine type : NONE  
 VM sub-address : NONE  
 Destination : NONE

#### \* TST ##### (Test)

This command instructs the BDX-D1000 to execute the specified self-diagnostics.

Test numbers and descriptions are as follows:

Test No.	Description
2	DEC Board
3	TSI Board
4	DIO Board
5	DAC Board
6	DP Board
7	DIF Board

It can be requested these self-diagnostics menus by using “HELP:TST?” command.

When the self-diagnostics is completed, the BDX-D1000 returns “\* ATN:OPC;”.

#### \* TST? (Test Query)

This command requests the results of the self-diagnostics stored in the buffer.

The responses for each self-diagnostics are as follows:

2: DEC Board	OK	ERROR
3: TSI Board	OK	ERROR
4: DIO Board	OK	ERROR
5: DAC Board	OK	ERROR
6: DP Board	OK	ERROR
7: DIF Board	OK	ERROR

#### FLAGS? (Flag Query)

This command requests the flag information.

The following five flags are defined.

Power cycled on : Returns “yes” only one time when power is turned on.  
 EDH now : Returns “no” at all times.  
 EDH in past : Returns “no” at all times.  
 EDA now : Returns “no” at all times.  
 EDA in past : Returns “no” at all times.

#### \* STATUS? (Status Query)

This command requests the current operation status.

There are two varieties of statuses.

DECODE : During normal operation

ERROR : During abnormal operation

#### \* CMDERR? (Command Error Query)

When an error detected by the error check for received command, the content stored in the buffer. This command requests the contents of the command error buffer.

**\* MSG? ##### (Message Register Query)**

This command requests the error/warning status that occur in the BDX-D1000.

“#####” is a register number, and it is defined as follows:

Register No.	Description
65	FAN ERROR
100	DEC BOARD ERROR
101	TSI BOARD ERROR
102	DIO BOARD ERROR
103	DAC BOARD ERROR
104	DP BOARD ERROR
200	DIO BOARD ERROR

**HELP:TST? (Help: Test Menu Query)**

This command requests the self diagnostics menu.

The BDX-D1000 supports the following self-diagnostics menu:

Test No.	Description
002	DEC Board
003	TSI Board
004	DIO Board
005	DAC Board
006	DP Board
007	DIF Board

**DEVID (Device ID Set)**

This command is used to set the device ID.

This setting data will be reflected in “Device ID” of response to “\* IDN?” command.

When the setting is complete, the BDX-D1000 returns “\* ATN:OPC;”.





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BDX-D1000 (SY)  
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BDKP-D1004 (SY) J, E  
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